

REMARKS/ARGUMENTS

Reconsideration of this application is requested. Claims 14-33 are in the case.

I. THE INTERVIEW

At the outset, the undersigned wishes to thank the Examiner (Mr. Alvo) for kindly agreeing to conducting an interview in this application. The interview was conducted on March 16, 2005 by telephone, and the courtesies extended by the Examiner are most appreciated. The purpose of the interview was to discuss the outstanding obviousness rejection, and the possibility of presenting an amendment to claim 14 to specify that the method is for the production of mechanical pulp from an unbleached cellulose-containing wood or non-wood raw material, and further to specify subjecting the material to a second refining step to produce strength-contributing secondary fines. The Examiner indicated that since these features had not been claimed before, and since the case is currently under final rejection, it was his view that it would be necessary to also submit an RCE to secure entry and consideration of the proposed amendments. In light of the outcome of the interview, the present response is being accompanied by an RCE. Entry of the present amendment and consideration thereof are accordingly respectfully requested.

II. THE OBVIOUSNESS REJECTIONS

Claims 14, 15, 17, 19-21 and 26-31 stand rejected under 35 U.S.C. §103(a) as allegedly unpatentable over U.S. Patent 4,776,926 to Lindahl, either alone or in

combination with U.S. Patent 4,731,160 to Prough. That rejection is respectfully traversed.

As presently claimed, the invention is directed to a method for producing mechanical pulp from an unbleached cellulose-containing wood or non-containing wood raw material. The method comprises subjecting the unbleached material to a first refining step to produce primary fines consisting essentially of middle lamella fragments and the materials originated from the parenchyma cells and containing lignin and extractives, subjecting the material to a second refining step to produce strength-contributing secondary fines having about the same size as the primary fines but having a different composition, and fractionating the pulp after the first refining step but before the secondary refining step to separate primary fines from the pulp. The separated primary fines are then removed from the production of mechanical pulp.

Support for performing the invention on an unbleached raw material appears in the originally filed application, for example, at page 4, lines 5-11, page 6, lines 5-9 and lines 33-35. Support for the second refining step producing strength-contributing secondary fines appears at page 3, line 13. No new matter is entered.

The method of the present invention is distinguished from the cited prior art in that it is an **unbleached** raw material which is subjected to the refining and fractionation treatments. Moreover, it is not until the primary fines have been separated off that the secondary fines are produced in the second refining step. Primary fines have a composition which tends to consume bleach chemicals, whereas the tendency of the secondary fines consume bleach chemicals is less, and the secondary fines make a greater contribution to the final strength of the pulp. For this reason, according to the

present invention, fractionation takes place after the primary fines are produced but before the secondary fines are produced so as not to lose the strength contributing pulp material, and prior to bleaching of the pulp.

In Lindahl, the fractionation and mechanical working is performed on the pulp after bleaching of the pulp. Thus, as stated at column 3, beginning at line 33:

"In the process of the invention, **after bleaching** the pulp, and thinning it to a low pulp consistency, with vigorous agitation to break up the fiber flocs present, the pulp is fractionated into a long-fiber fraction and a fine-fiber fraction, ..." (Emphasis added)

In Example 1, at column 6, beginning at line 32, it is stated that the pulp was transported to the plant for "screening, bleaching, and fractionation". In addition, at columns 13 and 14, in claim 1, the process is stated to comprise screening and dewatering pulp, bleaching the pulp, thinning the bleached pulp, mechanically working the pulp to disintegrate fiber floc present, thinning the worked pulp, and "then fractionating the pulp into a fine fiber fraction...".

In light of the above, it is clear that Lindahl does not disclose or suggest a method in which unbleached cellulose-containing material is subjected to the refining steps as defined in amended claim 14. It follows from Lindahl that the bleached pulp treated in the fractionation described at column 5, beginning at line 37 contains strength-contributing secondary fines that will be separated from the pulp together with the primary fines during that fractionation. Since bleaching precedes fractionation in the Lindahl approach, the pulp will still contain primary fines that do not make a major contribution to the strength of the pulp but do consume unnecessary bleach chemicals

and subsequently, in the fractionation, these bleached primary fines will be separated off with the secondary fines which would be strength-contributing if retained in the pulp.

At column 5, lines 58-60, Lindahl refers to "gentle mechanical working of the pulp fibers". This gentle mechanical working does not produce strength-contributing secondary fines. Instead, strength-contributing secondary fines are already produced in the "further disc refiner" referred to at column 1, line 17 and consequently, they have also been separated off from the pulp in the fractionation referred to at column 5, lines 37-42. In the presently claimed process, the pulp is fractionated after the first refining step but before the second refining step to separate primary fines from the pulp.

Based on the above, it is clear that the presently claimed invention is not disclosed or suggested by Lindahl, either alone or in combination with Prough. Prough does not suggest a methodology wherein pulp is fractionated after a first refining step but before a second refining step to remove primary fines from the pulp. One of ordinary skill would not, therefore, have been motivated to arrive at the presently claimed invention in light of Lindahl, either alone or in combination with Prough. Absent any such motivation, a *prima facie* case of obviousness has not been generated in this case. Reconsideration and withdrawal of the outstanding obviousness rejection of claims 14, 15, 17, 19-21 and 26-31 are accordingly respectfully requested.

Claims 16, 18, 24 and 25 stand rejected under 35 U.S.C. §103(a) as allegedly unpatentable over Lindahl in view of Prough. Claims 22 and 23 stand rejected under 35 U.S.C. §103(a) as allegedly unpatentable over Lindahl with or without Prough and further in view of Jones (U.S. Patent 3,411,720) or Karnis (U.S. Patent 4,292,122).

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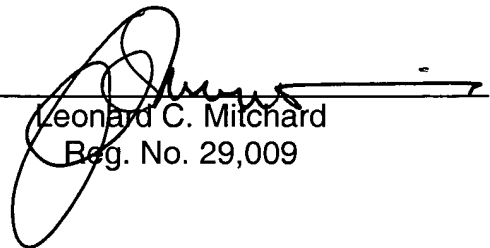
The rejected claims are all dependent on claim 14, which is patentably distinguished over Lindahl, either alone or in combination with Prough, for the above-discussed reasons. Withdrawal of the outstanding obviousness rejections of claims 16, 18, 22, 23, 24 and 25 is accordingly respectfully requested.

Favorable action on this application is awaited.

Respectfully submitted,

NIXON & VANDERHYE P.C.

By: _____



Leonard C. Mitchard
Reg. No. 29,009

LCM:lfm
1100 North Glebe Road, 8th Floor
Arlington, VA 22201-4714
Telephone: (703) 816-4000
Facsimile: (703) 816-4100